

Work Order ID 160801

Thursday, May 04, 2017 10:49:54 AM

160801

Page 1

Item ID: D350-578-031

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AS350/AS355 Bearpaw Wearplates

Start Date: 5/19/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/26/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: *PA***DAS**
21
9-89Date: *2017/05/08*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D350-578

H

DAS
6
9-89**JUN 01 2017**

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and type labels per PPP D350-578-031 CHG 003

DAS
27
9-89**JUN 07 2017**

105

Pick Kit

0.00

105

Packaging

Memo

0.00

Packaging

4 CWR**JUN 06 2017****DAS**
6
9-89

110

QC4- 100% Inspect kits for completeness

0.00

110

QC

Memo

0.12

Quality Control

4 **DAS**
27
9-89**JUN 07 2017**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 160801

Thursday, May 04, 2017 10:49:54 AM

160801

Page 2

Item ID: D350-578-031 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AS350/AS355 Bearpaw Wearplates
Start Date: 5/19/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 5/26/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Packaging	0.00							
120									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D350-578-031 and DSI9429								
	Location: _____								
	PPP Rev: <u>fs128</u>								
130	QC21- Final Inspection - Work Order Release	0.00							JUN 07 2017
130									
QC	Memo	0.40							
Quality Control									

DAS
21
9-89

JUN 07 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

Picklist Print

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Page 1

Work Order ID: 160801

160801

Parent Item: D350-578-031

D350-578-031

Parent Item Name: AS350/AS355 Bearpaw Wearplates

Start Date: 5/19/2017

Required Date: 5/26/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 09-02-03 new issue DD verified by:JLM IPP REV:B
14.05.01 AS PER ECN14-544 DD VERF:JLM IPP REV:C 15.03.30
JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3859-041 *D3859-041* Wearplate Assembly		Manufactured	No			105	Each	5.0000	2	8		JUN 06 2017	DAS 6 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST610			5					
					147241			1					
					158149			4					
AN4-16A *AN4-16A* Bolt		Purchased	No			105	Each	348.0000	12	48		JUN 06 2017	DAS 6 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					FG			5					
					121541			5					
					over003			300					
					M136986			100					
					M137412			200					
					ST343			43					
					M136740			43					

DAS
27
9-89

DAS
27
9-89

B150099 x 2
B159913 x 1

CWB

48

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification J.S. S.M.C. QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐								
		OTHER :							

Picklist Print

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Work Order ID: 160801

160801

Parent Item: D350-578-031

D350-578-031

Parent Item Name: AS350/AS355 Bearpaw Wearplates

Start Date: 5/19/2017

Required Date: 5/26/2017

Start Qty: 4.00

Required Qty: 4.00

AN4-17A

Purchased

No

105

Each

318.0000

12

48

AN4-17A

Bolt

**

CWB

JUN 06 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

over003

250

M137073

100

M137371

150

ST343

68

M136787

18

M136983

50

39

7

2

96

NAS1149D0463J

Purchased

No

105

Each

4,351.000

24

NAS1149D0463.I

Washer

**

M137544 CWB

JUN 06 2017
DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

48

M135056

48

ST260a

4000

M137371

2000

M137381

2000

ST263

303

M137166

303

Thursday, May 04, 2017 10:49:54 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Picklist Print

Thursday, May 04, 2017 10:49:54 AM

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Work Order ID: 160801

160801

Parent Item: D350-578-031

D350-578-031

Parent Item Name: AS350/AS355 Bearpaw Wearplates

Start Date: 5/19/2017

Required Date: 5/26/2017

Start Qty: 4.00

Required Qty: 4.00

MS21042L4

Purchased

No

105

Each

3,130.000

12

48

MS21042L4

**

CWB

JUN 06 2017

Nut

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

10

m133363

10

GA

148

m135058

148

OVER007

1400

m137371

1000

m137402

400

ST303

1572

m136986

3

m137166

12

m137321

1557

48

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

5.0 PARTS LIST

5.1 D350-578-011/-013/-015/-017/-021 BEARPAW INSTALLATION

Qty -011	Qty -013	Qty -015	Qty -017	Qty -021	Qty -031	Part Number	Description
X						D350-578-011	BEARPAW INSTALLATION
	X					D350-578-013	BEARPAW INSTALLATION
		X				D350-578-015	BEARPAW INSTALLATION
			X			D350-578-017	BEARPAW INSTALLATION
				X		D350-578-021	BEARPAW INSTALLATION
					X	D350-578-031	WEARPLATE KIT
2						D2432F	Bearpaw
		2				D2432-3	Bearpaw
12	12	12	12	12		D2529	Washer
				2		D2672F	Bearpaw
12	12	12	12	12		D3601-1	Radius Block (Replaces D2274)
					2	D3859-041	Wearplate
6	6	6	6	6		D4011-1	Clamp (Replaces D2438)
6	6	6	6	6		D4012-1	Cushion (Replaces D2182B050)
	2					D4297-1	Bearpaw
			2			D4297-3	Bearpaw
12	12			12	12	AN4-16A	Bolt
		12	12		12	AN4-17A	Bolt
24	24	24	24	24	24	NAS1149D0463J	Washer
12	12	12	12	12	12	MS21042L4	Nut (or MS21042-4)

5.2 D350-578-111/-113/-115/-117/-121 BEARPAW INSTALLATION

Qty -111	Qty -113	Qty -115	Qty -117	Qty -121	Part Number	Description
X					D350-578-111	BEARPAW INSTALLATION
	X				D350-578-113	BEARPAW INSTALLATION
		X			D350-578-115	BEARPAW INSTALLATION
			X		D350-578-117	BEARPAW INSTALLATION
				X	D350-578-121	BEARPAW INSTALLATION
1					D350-578-011	Bearpaw Installation
	1				D350-578-013	Bearpaw Installation
		1			D350-578-015	Bearpaw Installation
			1		D350-578-017	Bearpaw Installation
				1	D350-578-021	Bearpaw Installation
1	1	1	1	1	D350-578-031	Wearplate Kit

Work Order ID 160801

160801

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Thursday, May 04, 2017 10:49:54 AM

Item ID: D350-578-031

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: AS350/AS355 Bearpaw Wearplates

Start Date: 5/19/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/26/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

PA
DAS
21
3.30

Date:

2017/05/04

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D350-578	H								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile and type labels per PPP D350-578-031 CHG 003								
105	Pick Kit	0.00							
105									
Packaging	Memo	0.00							
Packaging									
110	QC4- 100% Inspect kits for completeness	0.00							
110									
QC	Memo	0.12							
Quality Control									

JUN 01 2017

CB

(4)

JUN 05 2017



Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH93-4

Issue No.: 10

Approval Date: March 30, 1993

Issue Date: March 09, 2015

Responsible Office:

Prairie and Northern

Aircraft/Engine Type or Model:

Airbus Helicopters AS 350 B, B1, B2, B3, BA, D; AS 355 E, F, F1, F2, N, NP; EC 130 B4 and T2.

Canadian Type Certificate or Equivalent:

H-87 (Airbus Helicopters AS 355 E, F, F1, F2, N, NP)
H-83 (Airbus helicopters AS 350 B, B1, B2, B3, BA, D; EC 130 B4 and T2)

Description of Type Design Change:

Bearpaw Installation

AS 350/355 models

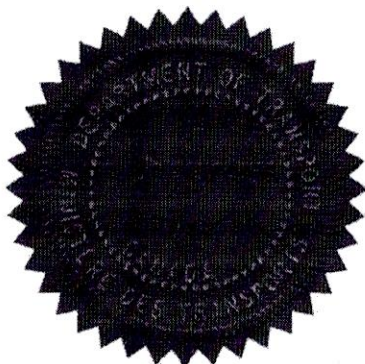
Manufacture of the bearpaw kits must be in accordance with Dart Aerospace Ltd. MDL-D350-578, Revision A, dated Jun 11th, 2010 or later approved revision.

Installation of the bearpaw kits must be in accordance with Dart Aerospace Ltd. Drawing D350-578, Revision F, dated Aug 28th, 2008 or later approved revision.

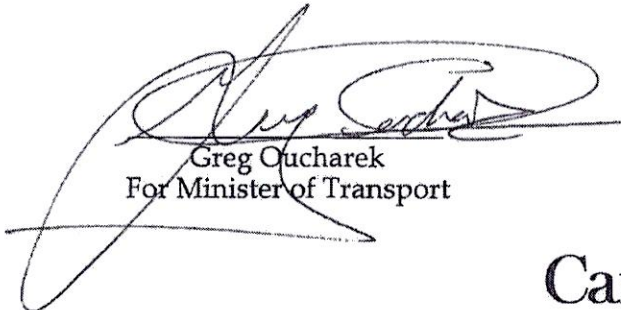
Maintenance of the bearpaw kits must be in accordance with Transport Canada accepted Dart Aerospace Ltd. ICA-D350-578, Revision 1, dated Aug 28th, 2008 or later Transport Canada accepted revision.

The basis of certification for this modification was FAR 27, up to and including Amendment 27-23.

- See Continuation Sheet -



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the modified product.


Greg Oucharek
For Minister of Transport

Canada